

SEQ ID N: 2

<!--StartFragment-->RESULT 1  
AAG79755  
ID AAG79755 standard; protein; 490 AA.  
XX  
AC AAG79755;  
XX  
DT 01-APR-2003 (first entry)  
XX  
DE Human hydroxylase #1.  
XX  
KW Hydroxylase; tryptophan hydroxylase; gene therapy; enzyme;  
KW gene regulation; depression; anxiety; immune disorder;  
KW Alzheimer's disease; epilepsy; Parkinson's disease.  
XX  
OS Homo sapiens.  
XX  
PN WO200297039-A2.  
XX  
PD 05-DEC-2002.  
XX  
PF 23-MAY-2002; 2002WO-US016635.  
XX  
PR 29-MAY-2001; 2001US-0294076P.  
XX  
PA (LEXI-) LEXICON GENETICS INC.  
XX  
PI Yu X, Miranda M, Hu Y;  
XX  
DR WPI; 2003-140457/13.  
DR N-PSDB; ABA00787.  
XX  
PT Novel human proteins and polynucleotides that share sequence similarity  
PT with mammalian hydroxylases useful in industrial, therapeutic, diagnostic  
PT and pharmacogenomic applications.  
XX  
PS Claim 9; Page 39-40; 45pp; English.  
XX  
CC The sequences given in AAG79755-58 represent human hydroxylases,  
CC particularly tryptophan hydroxylases. The novel human protein (NHP)  
CC sequences are useful to identify mutations associated with a particular  
CC disease and also as a diagnostic or prognostic assay, and also in the  
CC molecular mutagenesis/evolution of proteins that are at least partially  
CC encoded by the NHP sequences. Sequences derived from regions adjacent to  
CC the intron/exon boundaries of NHP gene can be used to design primers for  
CC use in amplification assays to detect mutations within the exons, splice  
CC sites, introns that can be used in diagnostics and pharmacogenomics. NHP  
CC sequences are utilized in microarrays or other assay formats, to screen  
CC collections of genetic material from patients who have a particular  
CC medical condition. NHP nucleotide sequences are useful for drug screening  
CC effective in the treatment of symptomatic or phenotypic manifestations of  
CC perturbing the normal function of NHP in the body, and nucleotide  
CC constructs encoding NHP products are used to genetically engineer host  
CC cells to express NHP products in vivo. These genetically engineered cells  
CC function as bioreactors in the body delivering a continuous supply of a  
CC NHP, a NHP peptide, or a NHP fusion protein to the body. Nucleotide  
CC construct encoding NHP products are also useful in gene therapy for  
CC modulating NHP expression and to produce genetically engineered host  
CC cells to express NHP products in vivo. NHP nucleotide sequences may also  
CC be used as part of ribozyme and/or triple helix sequences that are useful  
CC for NHP gene regulation. The encoded NHP polypeptides are useful for  
CC generating antibodies, as reagents in diagnostic assays, for identifying

CC other cellular gene products related to NHP and as reagents in assays for  
 CC screening for compounds that are useful in the treatment of mental,  
 CC biological or medical disorders and diseases. NHPs can be used in drug  
 CC screening assays to identify compounds for treating diseases such as for  
 CC e.g. depression, anxiety, immune disorders, Alzheimer's disease, epilepsy  
 CC and Parkinson's disease

XX

SQ Sequence 490 AA;

Query Match 100.0%; Score 2584; DB 6; Length 490;  
 Best Local Similarity 100.0%; Pred. No. 6.9e-248;  
 Matches 490; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MQPAMMMFS SKYWARRGFSLDSAVPEEHQLGSSTLNKPNSGKNDKGKNGSSKREAATE	60
Db	1	MQPAMMMFS SKYWARRGFSLDSAVPEEHQLGSSTLNKPNSGKNDKGKNGSSKREAATE	60
Qy	61	SGKTAVVFSLKNEVGLVKALRLFQEKRVNMVHIESRKSRSSSEVEIFVDCECGKTEFN	120
Db	61	SGKTAVVFSLKNEVGLVKALRLFQEKRVNMVHIESRKSRSSSEVEIFVDCECGKTEFN	120
Qy	121	ELIQLLKQTTIVTLNPPENIWTTEEELEDVPWFPRKISELDKCSHRVLMYGSSELADHP	180
Db	121	ELIQLLKQTTIVTLNPPENIWTTEEELEDVPWFPRKISELDKCSHRVLMYGSSELADHP	180
Qy	181	GFKDNVYRQRRKYFVDVAMGYKYGQPIPRVEYTEEETKTWGVVFRELSKLYPTHACREYL	240
Db	181	GFKDNVYRQRRKYFVDVAMGYKYGQPIPRVEYTEEETKTWGVVFRELSKLYPTHACREYL	240
Qy	241	KNFPLLTCKYCGYREDNVPQLEDVSMFLKERSGFTVRPVAGYLSPRDFLAGLAYRVFHCTQ	300
Db	241	KNFPLLTCKYCGYREDNVPQLEDVSMFLKERSGFTVRPVAGYLSPRDFLAGLAYRVFHCTQ	300
Qy	301	YIRHGSDPLYTPEPDTCHELLGHVPLLAGDKFAQFSQEIGLASLGASDEDVQKLATCYFF	360
Db	301	YIRHGSDPLYTPEPDTCHELLGHVPLLAGDKFAQFSQEIGLASLGASDEDVQKLATCYFF	360
Qy	361	TIEFGLCKQEGQLRAYGAGLLSSIGELKHALSDKACVKAFDPKTTCLQECLITTFQEAYF	420
Db	361	TIEFGLCKQEGQLRAYGAGLLSSIGELKHALSDKACVKAFDPKTTCLQECLITTFQEAYF	420
Qy	421	VSESFEEAKEKMRDFAKSITRPFSVYFPYTQSIEILKDTRSIENVVQDLRSDLNTVCDA	480
Db	421	VSESFEEAKEKMRDFAKSITRPFSVYFPYTQSIEILKDTRSIENVVQDLRSDLNTVCDA	480
Qy	481	LNKMNQYLGI 490	
Db	481	LNKMNQYLGI 490	

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